REMARKS

On October 15, 2003, applicants conducted a telephonic interview with Examiner Shosho. The topics of discussion included all pending claims 1-24, as well as U.S. Patent 6,066,442 to Kurachi, et al. The Examiner also noted that Claims 5 and 19 contain allowable subject matter. In response to the October 15 phone interview, applicants have amended Claims 1, 10 and 15 to further clarify the invention and presently submit a Declaration under 37 CFR 1.132 in support of our technical arguments and at the request of Examiner Shosho.

Discussions during the interview focused upon the Kurachi reference and distinguishing features between applicant's invention and the prior art reference. Specifically, applicants stated that Kurachi teaches a different invention primarily because of the use of a dispersion instead of a complete particle-free solution, as in the present invention. The unique solution of the present invention results in an unexpectedly flat and transparent conductive tin oxide film.

Claims 1-4, 6, 8-18, 21 and 22 stand rejected as being anticipated by Kurachi, et al. Applicants respectfully traverse the rejection. As discussed previously, Kurachi teaches an anti-static-treated film material having an electro-conductive layer. However, Kurachi does not teach electro-conductive particles as an aqueous complete solution as in the present invention. As pointed out by Examiner Shosho, Kurachi, et al. merely disclose that the anti-static layer is composed of the electro-conductive particles, an organic compound having Tg or melting point at not higher that 50° C, and a polymeric binder. (Col. 7, lines 55-59). Kurachi, et al. further disclose the method of *dispersing* the electro-conductive or semi-conductive particles in the mixture of the polymeric binder and the organic compound having Tg of fusing point not higher than 50° C. (col.11, lines 22-25). In addition, Kurachi, et al. disclose that the ingredients of the invention can be added "...when they are dispersed in water or an organic solvent, a solvent, to which other ingredients of the present invention are dispersed in advance in a dispersion medium such as water or an organic solvent, may be added." (Col. 10, lines 24-28). The electro-conductive particles and semi-conductive fine particles are used *after* being *dispersed* or *dissolved* in a binder. (col. 10, lines 29-31). Furthermore, the electro-conductive particles are only used as sol solution, such as SnO_2 sol solution in the examples. (See for example, Col. 23, line 27 through Col. 24, line 7). While Kurachi mentions dissolving or dispersing the semi-conductive fine particles in a binder, it is

clear that the intent is simply mixing the solution. It is also clear that the resulting mixture is a dispersion of conductive particles. This is further supported by all of the examples in Columns 23 and 24, which illustrate dispersed solutions of conductive particles. The cited reference does not, however, teach using the electro-conductive particles as a complete, particle free, aqueous solution as in the present invention.

In support of our position, applicants submit a Declaration of Takashi Uchida, an inventor of the present invention, describing the results of experiments conducted following the teachings of Kurachi and the present invention. Included with the Declaration are four figures that represent the results of the experiments conducted by Mr. Takashi Uchida. The figures further highlight the differences between the present invention and the prior art reference.

The results of the experiments clearly indicate that a dispersion results when employing the teaching of Kurachi while a clear and complete, particle free, solution results when following the present invention. When the dispersion and complete solution of the experiments was prepared and coated on a substrate, the two tin oxide films exhibited drastically different properties. The film created using the Kurachi dispersion exhibited grains 0.5 to 1 micrometer in diameter on the surface as measured by an atomic force microscope. The amplitude of the asperities on the surface of the film was observed to be approximately 30 nanometers. In sharp contrast, the resulting thin tin oxide film of the present invention did not exhibit any distinct grains on the film surface and the amplitude of asperities on the surface of the film was found to be around 10 nanometers. The resulting transparent thin tin oxide film of the present invention, as represented in Figures 1A, 1B, 2A and 2B of the Declaration, clearly shows the surprisingly superior flat film that is created.

Thus, Kurachi, et al. fails to teach, disclose, or even suggest, a coating solution for forming transparent conductive tin oxide film of the present invention. .

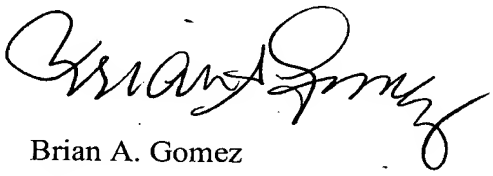
Examiner Shosho rejects Claims 7 and 20 under 103(a) as being unpatentable over Kurachi, et al, in view of U.S. Patent 4,113,507 to McHenry, et al. Applicants respectfully disagree.

According to the Examiner, the difference between Kurachi and the present invention is the requirement in the claims of amine. Since McHenry is drawn to tin oxide film and discloses the use of amine, the Examiner concludes that it would have been obvious to use amine in the either of the primary references and arrive at the present invention. Not only is

Kurachi inappropriate primary reference, as discussed above, but McHenry is not sufficient to bridge the deficiencies left by Kurachi. McHenry, et al. is insufficient because they merely disclose the use of amine such as triethylamine, trimethylamine and diethylamine as a solvating agent. The present invention, on the other hand, comprises an aqueous solution containing stannic acid, and a water-soluble polymer having a polar group. Furthermore, Claim 1 of the present invention requires that the polymer is dissolved in the aqueous solution in the presence of at least one compound selected from the group consisting of ammonia, a water-soluble amine and basic quaternary amine. Therefore, the rejection should be withdrawn.

In light of the above amendments, remarks and 37 CFR 1.132 Declaration, Claims 1-24 are considered to represent a novel and unobvious advance in the art. Prompt issuance of a Notice of Allowance for these claims is requested. If any issues remain outstanding, the Examiner is urged to contact the undersigned attorney to expedite their resolution.

Respectfully submitted,



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